

### AMENDMENTS TO THE CLAIMS

Claims 1-22. (*cancelled*)

Claim 23. (*new*) A method for improving the precision in counting the number of particles or cells suspended in a given volume of a test sample that ranges from low particle/cell counts to high particle/cell counts, comprising:

- a) delivering a sheath stream of the test sample at a first volumetric flow rate to a detection means for counting the number of particles or cells in the test sample, wherein the sheath stream has a cross-sectional diameter adapted to deliver to said detection means substantially one particle or cell at the test sample at a time;
- b) making an initial count of the particles or cells of said test sample per unit time with said detection means;
- c) comparing the initial count of the number of cells or particles in the test sample to a reference value;
- d) adjusting the flow rate of the test sample to a second volumetric flow rate based on the comparative number of cells or particles in the test sample to the reference value, thereby improving the precision of the detection means in counting the number of cells or particles in the test sample.

Claim 24. (*new*) The method of claim 23, wherein the second volumetric flow rate optimizes the ability of the detection means to make a precise count of the particles or cells in the test sample.

Claim 25. (*new*) The method of claim 23, wherein the test sample is a hematology sample.

Claim 26. (*new*) The method of claim 23, wherein the first volumetric flow rate of the sheath fluid is at laminar flow.

Claim 27. (*new*) The method of claim 23, wherein the detection means is magnetic.

Claim 28. (*new*) The method of claim 23, wherein the detection means is optical.

Claim 29. (*new*) The method of claim 23, wherein the detection means is a laser beam.